

What is claimed is:

1. A vehicle frame assembly comprising:
a plurality of structural members that are secured together to form a vehicle frame assembly, wherein at least one of said plurality of structural members defines a
5 interior portion; and
a pressurizing device that communicates with said interior portion and is responsive to a predetermined condition for increasing the magnitude of pressure in said interior portion.
- 10 2. The vehicle frame assembly defined in Claim 1 wherein said plurality of structural members includes a pair of side rails and a plurality of cross members that are connected together to form a ladder frame assembly, and wherein said at least one of said plurality of structural members is one of said pair of side rails.
- 15 3. The vehicle frame assembly defined in Claim 1 wherein said at least one of said plurality of structural members is a closed channel structural member.
4. The vehicle frame assembly defined in Claim 3 wherein a pair of
internal plates is provided within said closed channel structural member to define said
20 interior portion.
5. The vehicle frame assembly defined in Claim 1 wherein said
pressurizing device is supported within an opening formed through said at least one of
said plurality of structural members.
- 25 6. The vehicle frame assembly defined in Claim 5 wherein said
pressurizing device is secured to said at least one of said plurality of structural
members.

7. The vehicle frame assembly defined in Claim 1 wherein said pressurizing device includes a hollow housing defining an interior and having a plurality of apertures formed therein such that said interior of said housing communicates with said interior portion of said at least one of said plurality of structural members.

8. The vehicle frame assembly defined in Claim 7 wherein said pressurizing device further includes a liner disposed within said interior of said housing to cover said apertures.

9. The vehicle frame assembly defined in Claim 7 wherein said pressurizing device further includes a quantity of a material disposed within said interior of said housing that is capable of expanding or changing state rapidly.

10. The vehicle frame assembly defined in Claim 7 wherein said pressurizing device further includes a liner disposed within said interior of said housing to cover said apertures and a quantity of a material disposed within said interior of said liner that is capable of expanding or changing state rapidly.

11. The vehicle frame assembly defined in Claim 9 wherein said pressurizing device further includes an actuating mechanism that communicates with said interior of said housing for selectively causing said material to expand or change state rapidly

12. The vehicle frame assembly defined in Claim 1 further including a control system for controlling the operation of said pressurizing device.

13. The vehicle frame assembly defined in Claim 13 wherein said control system includes a sensor for generating a signal that is representative of an operating

condition and a controller that is responsive to said signal for controlling the operation of said pressurizing device.

14. The vehicle frame assembly defined in Claim 13 wherein said sensor is
5 an impact sensor that generates said signal to said controller when a portion of said vehicle frame assembly is impacted.

15. The vehicle frame assembly defined in Claim 1 wherein a plurality of
said structural members define respective interior portions, and wherein a pressurizing
10 device communicate with each of said interior portions, said pressurizing devices being responsive to respective predetermined conditions for increasing the magnitude of pressure respectively in said interior portions.